

## Claims

### WHAT IS CLAIMED IS:

1    1.    A method for policy and attribute based access to a resource, comprising:  
2       interacting with a principal for authenticating the principal based on acquired  
3       identity information;  
4       assembling an identity configuration for the principal;  
5       generating a service contract for the principal, a service, and a resource,  
6       wherein the principal uses the service to access the resource, and wherein the  
7       service contract includes a selective number of resource access policies and  
8       attributes which are included in the identity configuration; and  
9       transmitting an access statement to the principal for use when the principal  
10      interacts with the service.

1    2.    The method of claim 1 further comprising generating alias identity  
2       information for the identity information and including the alias identity information  
3       with at least a portion of the access statement.

1    3.    The method of claim 2 further comprising:  
2       receiving the alias identity information from the service;  
3       mapping the alias identity information back to the identity information;  
4       authenticating the identity information; and  
5       permitting the service to the resource based on the service contract.

1    4.    The method of claim 1 wherein the transmitting of the access statement  
2       further includes representing the access statement as an assertion that is directly  
3       used to acquire the identity information of the principal.

1    5.    The method of claim 1 wherein the transmitting of the access statement  
2       further includes representing the identity information of the principal as an artifact

3 that can be indirectly used to acquire the identity information.

1 6. The method of claim 1 further comprising removing the service contract  
2 when an active session with the principal expires.

1 7. The method of claim 1 wherein the interacting further includes establishing a  
2 secure communication with the principal.

1 8. A method for policy and attribute based access to a resource, comprising:  
2 receiving a session request for access to a resource, wherein the session  
3 request is sent from a service and includes alias identity information for a principal;  
4 mapping the alias identity information to identity information of the  
5 principal;  
6 authenticating the identity information;  
7 acquiring a service contract for the principal, the service, and the resource,  
8 wherein the service contract includes selective resource access policies and  
9 attributes which are permissibly used by the service on behalf of the principal; and  
10 establishing a session with the service, wherein the session is controlled by  
11 the service contract.

1 9. The method of claim 8 further comprising accessing an identity  
2 configuration for the principal in order to acquire the selective resource access  
3 policies and attributes included within the service contract.

1 10. The method of claim 8 further comprising denying access attempts made by  
2 the service during the session when the access attempts are not included within the  
3 service contract.

1 11. The method of claim 8 further comprising terminating the session when an  
2 event is detected that indicates the service contract is compromised or has expired.

1    12.    The method of claim 8 further comprising establishing the service contract  
2    with the principal prior to receiving the session request.

1    13.    The method of claim 12 further comprising reusing the service contract to  
2    establish one or more additional sessions with the service, wherein the one or more  
3    additional sessions are associated with one or more additional session requests made  
4    by the service.

1    14.    The method of claim 12 wherein the establishing further includes  
2    establishing the service contract with the principal in response to a redirection  
3    operation performed by a proxy that intercepts a browser request issued from the  
4    principal to the service for purposes of accessing the resource.

1    15.    A policy and attribute based resource access system, comprising:  
2                an identity authenticator;  
3                an identity configuration aggregator; and  
4                a resource session administrator;  
5                wherein the identity authenticator authenticates a principal for access to a  
6    resource based and generates a service contract, and wherein the identity  
7    configuration aggregator generates an identity configuration for the principal and  
8    the resource, the service contract defines selective resource access policies and  
9    attributes from the identity configuration, and wherein the resource session  
10   administrator establishes a session with a service and ensures that access attempts  
11   made by the service during the session conform to the service contract.

1    16.    The policy and attribute based resource access system of claim 15 wherein  
2    the system is implemented as a proxy server.

1    17.    The policy and attribute based resource access system of claim 15 wherein  
2    the service contract is generated in response to an intercepted resource-access  
3    request made by the principal to the service.

1    18.    The policy and attribute based resource access system of claim 17, wherein  
2    the resource-access request is redirected by a Hyper Text Transfer Protocol (HTTP)  
3    Proxy serving as an intermediary between the principal and the service.

1    19.    The policy and attribute based resource access system of claim 15, wherein  
2    the service contract is generated in response to a redirected resource-access request  
3    made by the principal to the service, and wherein the service redirects the resource-  
4    access request to the system.

1    20.    The policy and attribute based resource access system of claim 15, wherein  
2    the service contract expires when an active session with the principal expires.

1    21.    A policy and attribute based resource session manager, residing in a  
2    computer-accessible medium, comprising instructions for establishing a session  
3    with a resource, the instructions when executed performing the method of:  
4                receiving alias identity information from a service, wherein the alias identity  
5    information is associated with a principal;  
6                requesting a mapping of the alias identity information to principal identity  
7    information;  
8                requesting authenticating of the identity information;  
9                requesting a service contract for the principal, the service and a resource,  
10    wherein the service contract includes selective resource access policies and  
11    attributes derived from an identity configuration; and  
12                establishing a session with the service and the resource, wherein the session  
13    is controlled by the service contract.

1    22.    The policy and attribute based resource session manager of claim 21 having  
2    instructions further comprising, permitting the service to indirectly access an  
3    identity store which represents the resource, and wherein the identity store includes  
4    secure information related to the principal.

1    23.    The policy and attribute based resource session manager of claim 21 having  
2    instructions further comprising terminating the session when the service contract  
3    expires or is compromised.

1    24.    The policy and attribute based resource session manager of claim 21,  
2    wherein the requesting of the mapping further includes interacting with an alias  
3    translator.

1    25.    The policy and attribute based resource session manager of claim 21,  
2    wherein the requesting of authentication further includes interacting with an  
3    identification authenticator.

1    26.    The policy and attribute based resource session manager of claim 21 having  
2    instructions further comprising managing the session by acting as an intermediary  
3    between the service and a legacy Lightweight Directory Access Protocol (LDAP)  
4    application which has access privileges to the resource.

1    27.    The policy and attribute based resource session manager of claim 26,  
2    wherein the receiving further includes intercepting a session request that is issued  
3    from the service for the legacy LDAP application, wherein the session request  
4    includes the alias identity information.

1    28.    The policy and attribute based resource session manager of claim 27 having  
2    instructions further comprising managing the session with respect to the service as if  
3    the policy based resource session manager were the legacy LDAP application.

1    29.    The policy and attribute based resource session manager of claim 21 wherein  
2    the instructions for establishing the session further includes defining the selective  
3    resource access policies as at least one of a read operation and a write operation and  
4    defining the attributes as selective confidential data related to the principal, wherein

- 5      the policies define operations that are permissible on the attributes, and wherein
- 6      values for the attributes reside in the resource.